Rehabilitation Hospital Scenario

70%▼
ACIDIFICATION

80%▼
CO_2 EMISSIONS

55%▼
ECOTOXICITY

91%▼
EUTROPHICATION

95%▼
OZONE DEPLETION

78%▼
PARTICULATES

83%▼
SMOG

os3 Environmental Footprint Reduction Study Results

Compared to conventional packaged daily-use cleaning and disinfecting/sanitizing chemicals, cleaning spaces such as rehabilitation hospital facilities, community colleges and even large university campuses with solutions from the os3 system provides an significant reduction in a facility's environmental footprint across seven different categories, according to a study conducted by Ecoform, LLC.

OS3 SYSTEM: REDUCTION OF ENVIRONMENTAL IMPACT VERSUS CONVENTIONAL PACKAGED CLEANING CHEMICALS**

IMPACT CATEGORY	REHABILITATION HOSPITAL	COMMUNITY COLLEGE	UNIVERSITY
ACIDIFICATION	70%	0%	-6%◊
CO_2 EMISSIONS	80%	34%	29%
ECOTOXICITY	55%	-5%◊	-11%◊
EUTROPHICATION	91%	64%	52%
OZONE DEPLETION	95%	75%	72%
PARTICULATE	79%	31%	24%
SMOG	83%	41%	36%

LIFE-CYCLE EVALUATION SCENARIOS

PARAMETER	REHABILITATION HOSPITAL	COMMUNITY COLLEGE	UNIVERSITY
TOTAL FACILITY SIZE (SQ FT / SQ M)	600,000 / 182,000	340,000 / 103,000	3.2 million / 1 million
FLOOR AREA CLEANED (SQ FT / SQ M)	400,000 / 122,000	250,000 / 76,000	2 million / 600,000
CARPET / HARD FLOOR SPLIT (%)	10 / 90	40 / 60	40 / 60
HARD FLOORING TYPE	Terrazo / VCT	Terrazo / VCT / Polished Concrete	Terrazo / VCT / Polished Concrete
CLEANING STAFF (# OF WORKERS)	36	11	110
TRAFFIC / USE	180 patient rm / 60 rest rm / 8 labs	1,300 students	11,000 students
EQUIPMENT	2 os3 + 3 satellites	1 os3 + 3 satellites	12 os3 + 24 satellites

* MultiMicro 200 refers to MultiMicro Concentrate that has been diluted by the Orbio os3 dispenser to the ready-to-use form containing 200 ppm free available chlorine.

**Results based on estimates and assumptions set forth in the Life-Cycle Analysis Study.

◊The slight disadvantage for the os3 in the Acidification and Ecotoxicity categories stems from the use of highly concentrated conventional cleaners in the Community College and University Scenarios versus the Rehabilitation Hospital.

Orbio® os3 Environmental Footprint Reduction Questions and Answers

WHAT IS A LIFE-CYCLE ANALYSIS?

Life-cycle analysis is a methodology used to identify and quantify the environmental impacts of a product, service, or activity, across its life-cycle.

WHO PERFORMED THE LIFE-CYCLE ANALYSIS?

Jack Geibig, president of Ecoform, LLC, an independent company that focuses on the environmental performance of companies and their products and processes.

WHAT SOFTWARE WAS USED IN THE LIFE-CYCLE ANALYSIS?

Version 6 of the GaBi Life-Cycle Software.

WHERE CAN I READ THE ENTIRE LIFE-CYCLE ANALYSIS REPORT FOR THE os3?

Go to www.orbio.com to download the full Life-Cycle Analysis for the os3.

IMPACT CATEGORY	REDUCTION OF	CREATED BY	HARMFUL TO
ACIDIFICATION	SO_2 equivalents	Combustion processes in electricity and heating production and transportation	Fish and forests, by lowering the pH of water and soil
CO_2 EMISSIONS	CO_2 equivalents	Combustion of fossil fuels	Atmosphere (global climate change)
ECOTOXICITY	TEQ equivalents	Chemicals and toxins released into the aquatic ecosystem	Living organisms
EUTROPHICATION	NO_3 equivalents	Nutrients from discharged waste water and fertilized farmland	Fish and other life in the aquatic ecosystem, due to oxygen deficiency
OZONE DEPLETION	CFC equivalents	Emission of halocarbons	Humans, causing increased frequency of skin cancer and damage to plants
PARTICULATE	PM equivalents	Combustion of materials	Human respiratory systems, resulting in chronic respiratory illness
SMOG	Ethane equivalents	Reduction of VOCs and nitrogen oxides in the presence of heat and sunlight	Human respiratory systems, resulting in respiratory illness including chronic bronchitis and emphysema

Learn more about the Orbio® os3 and other innovations in cleaning. Contact Orbio today or visit our website at orbio.com

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